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REMARKS *on some* SCEPTICAL POSITIONS *in* MR. HUME'S
ENQUIRY *concerning the* HUMAN UNDERSTANDING *and*
his TREATISE *of* HUMAN NATURE. By RICHARD
KIRWAN, *Esq; L. L. D. F. R. S. and P. R. I. A.*

THOUGH numberless treatises of the ever jarring sects of scholastics had in all countries and for several ages obscured and disgraced the sublimer regions of speculative philosophy, and have been the fruitful parents of many absurdities in the sciences connected with it, yet, to the honour of the philosophers of that denomination, it must be owned, they confined their reasoning rage within the limits of pure speculation, and refrained from meddling with those principles that have an immediate influence on the conduct of human life. We have lived however to see an attempt made in our own days by a modern philosophical sect to subvert these also, or at least to involve them in all the darkness of the most dreary scepticism. For after the mists that overspread the regions of mere speculation

had

Read, O.S.
20th 1800.

had been in great measure dissipated by the luminous researches of Mr. Locke towards the end of the last, and of Dr. Berkeley towards the commencement of the present century, Mr. Hume about the middle of it advanced, and diffused, with no mean degree of success, many paradoxical opinions avowedly subversive of the primary principles of human reason, and tending to prove that most of its conclusions, even those of a practical nature, would, when traced to their source, be found destitute of any solid foundation, and in a word merely empiric. Of these opinions I have selected a few, namely :

1°. That beings of any kind may start into existence without the intervention of any efficient cause :

2°. THAT the connexion between phenomena and their supposed causes can in no case whatsoever be traced by reason, but in all cases is inferred merely from experience :

3°. THAT inferences from experience are themselves unsupported by any solid reason, for that none can be assigned for expecting similar effects from similar causes, but the mere custom or habit of seeing them conjoined :

4°. THAT *belief* is not an act of judgment, but a particular species of sentiment or feeling :

LASTLY,

LASTLY, That fallacious as all experimental reasoning may be, yet the violations of the laws of nature (the existence of which laws can be known and inferred only from experience) cannot be rendered credible in any case by any human testimony whatsoever.

ON each of these assertions I mean, with the indulgence of the Academy, to make a few observations.

SECTION I.

Of the Necessity of Causes.

MR. HUME, in the 3d section of the first book of his Treatise on Human Nature acknowledges, "it is a general maxim in philosophy *that whatever begins to exist must have a cause of existence*; this is commonly taken for granted, being supposed to be founded on intuition," but if examined, he tells us "it will be found to discover no mark of intuitive certainty; for this species of certainty arises from the discovery of such relations as are unalterable so long as the ideas continue the same, these are *resemblance, proportions in quantity and number, degrees of any quality, and contrariety*; none of which are implied in this proposition, *whatever has a beginning has also a cause of existence*; it is not therefore intuitively certain, at least whoever
" asserts

“ asserts it to be so, must deny these to be the only infallible
 “ relations, and must find some other relation of that kind im-
 “ plied in it*.

“ We can never demonstrate the necessity of a cause to every
 “ new existence or modification of existence, without shewing
 “ the impossibility that any thing can ever begin to exist with-
 “ out a productive cause; now that this is utterly incapable of
 “ a demonstrative proof we may satisfy ourselves by considering,
 “ that as the ideas of cause and effect are evidently distinct, it
 “ will be easy for us to conceive any object to be non-existent
 “ this moment and existent the next, without conjoining to it
 “ the distinct idea of a cause or productive principle. The se-
 “ paration therefore of the idea of a cause, from that of a
 “ beginning of existence, is plainly possible for the imagination,
 “ and consequently the actual separation of these objects is
 “ so far possible that it implies no contradiction nor absurdity,
 “ and is therefore incapable of being refuted by any reasoning
 “ from mere ideas, without which it is impossible to demonstrate
 “ the necessity of a cause.”

To me, however, the proposition alluded to, namely, *that
 whatever begins to exist must have a cause of its existence*, conveys
 intuitive

* In quoting Mr. Hume I do not always scrupulously adhere to his expressions;
 I endeavour to abridge, always retaining his sense.

intuitive certainty, a certainty not grounded on the relations he mentions, but on that of causation implied in the very terms of which that proposition consists, for the beginning of existence or the transition from non-existence to existence is evidently a change from nothing to something; now a change of any kind implies an action of some being or other, as it enters into the definition of an action, an action being such a disposition of a being as that a change results from it. But it cannot be the action of the being that begins to exist, as is evident: it must therefore be the action of some other being. Now a being from whose action the existence of another being results, is what is denominated its *cause*: the relation of causation is therefore included in it, and inseparable from the conception of *beginning* existence.

IN this argument the demonstration rests on the relation of causation necessarily resulting from the consideration of beginning existence; but an argument equally forcible will be found to arise from the consideration of another circumstance contained in Mr. Hume's objection to the intuitive certainty of the proposition in question.

He tells us that, "as the ideas of cause and effect are evidently distinct, it will be easy for us to conceive any object non-existent this moment, and existent the next, without con-joining to it the distinct idea of a cause or productive principle. The separation therefore of the idea of a cause from

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“ that of beginning existence is plainly possible for the imagination.”—Now I defy Mr. Hume or any one else to imagine an object as non-existing. He may imagine one that does not exist, as a golden mountain and a thousand other objects that imply no contradiction, and *judge* them not to exist, but he cannot *imagine* them but as existing; their representation in the imagination is just the same whether judged to exist or not to exist. To imagine an object as *non-existing*, if it means any thing, signifies to have no imagination at all of it. This oversight is so much the more remarkable, as he himself justly observes*, that the imagination barely copies or transposes the copies of sensible impressions; now a non-existing object, as such, can surely make no sensible impression. It is however true that we can conceive an object, and *judge* it not to exist this moment and to exist in the next; but during the moment of its non-existence, it must be supposed *possible*, that is, that a power exists somewhere of bringing it into existence; this is implied in the very notion of possibility. Reference to a cause is therefore implied in that notion and cannot be separated from it.

MR. HUME may perhaps reply that his notion of the possibility of an object includes no more than the compatibility of the attributes of that object—yet something more is evidently necessary to arrive at the state of existence, otherwise all objects
whose

* P. 318 of the Edition in 4to.

whose attributes involve no contradiction, would actually exist, and exist from all eternity. What should prevent them? Then we should have golden mountains, flying horses and every other chimera realized.

SECTION II.

Of the Source of our Knowledge of the Relation of Cause and Effect.

THE next assertion of Mr Hume which I now mean to examine, is that the connexion between causes and their effects can in *no case* be discovered *a priori* or by reasoning, but is solely collected from experience. There is no principle on which he more firmly relies, or repeats oftener. Thus, in the 155th page of the first volume of his Treatise on Human Nature, he tells us “ that the inference
“ we draw from cause to effect is not derived from a survey of
“ these particular objects, and such a penetration into their
“ essences as may discover the dependance of the one upon the
“ other. Such inference would amount to knowledge, and would
“ imply the absolute contradiction of any thing different.” And, page 299 of the 4^o. edition of his Essays, he says, “ I shall venture
“ to affirm as a general proposition which *admits of no exception*,
“ that the knowledge of this relation (of cause and effect) is not in
“ any instance attained by reasonings *a priori*, but arises entirely
“ from experience, when we find any particular objects are con-
“ stantly conjoined with each other.” And, page 300, “ We

“ fancy that, if we were brought of a sudden into this world, we
 “ would at first have inferred that one billiard ball would commu-
 “ nicate motion to another upon impulse—but the mind can
 “ never possibly find the effect in the supposed cause by the most
 “ accurate scrutiny and examination—motion in the second bil-
 “ liard ball is quite a distinct event from motion in the first, nor
 “ is there any thing in the one to suggest the smallest hint of the
 “ other.” And, page 301, “ When I see a billiard ball moving in
 “ a straight line towards another, even suppose motion in the other
 “ should by accident be suggested to me, may I not conceive that
 “ a hundred different events might as well follow from that cause?
 “ May not both the balls remain at absolute rest? May not the
 “ first ball return in a straight line, or leap off from the second in
 “ any line or direction? All these suppositions are consistent and
 “ conceivable. Why then should we give the preference to one,
 “ which is no more consistent or conceivable than the rest? No
 “ reasoning *a priori* will ever be able to shew us any foundation
 “ for this preference.”

Now, in opposition to what is thus so confidently asserted, I say,
 that from a knowledge of a few of the most general properties of
 bodies, a knowledge which is implied in the supposition of an at-
 tempt to reason *a priori*, the fact of the communication of motion
 by impulse may be inferred previous to actual experience of it.

To

To prove this I need only refer to Euler's Memoir on the Origin of Forces among those of the Academy of Berlin for 1750, and the 74th of his Letters to a German Princess. He there shews that, from a knowledge of the impenetrability of bodies, a stranger to the communication of motion must infer that a ball in motion cannot pass through a ball at rest; therefore a change of some kind must happen. And from another principle still more general, he must infer that the change produced is the smallest possible; a principle from which Maupertuis has deduced all the laws of motion. This principle rests on this evident ground; that no change is ever greater than the exigency of the circumstances in which it happens requires; for if it exceeded that exigency, it would, as to such excess, be an effect without a cause, which we have already shewn to be impossible. It also excludes the other vague suppositions of Mr. Hume, as Maupertuis shews at large in the Memoirs of Berlin for 1746. To be opposed by such high authorities is already a strong prejudice against him.

IN chymistry instances of inferences of this sort are so numerous that it would be endless to recite them. It is indeed in deducing properties before unknown from those already known, that chymical *sagacity* chiefly consists. The properties inferred were assuredly connected with those already known, as without such connexion there could be no inference; just as every mathematical proposition is connected with the propositions and axioms that
serve

serve to demonstrate it; yet as the fact discovered precedes the actual experiment, this must be called *reasoning a priori*, and is part of that *scrutiny and examination* which Hume asserts to be employed in vain. If he should say, that the properties from which others are inferred are themselves known only by experience, I shall readily allow it; for as the existence of bodies is not itself necessary, but results from the will of the Creator, so neither are the primary laws by which the various species of bodies and their combinations are governed. But these laws being once established, numerous facts are their necessary consequence, and may thus be traced *a priori*. To expect any other connexion in a subject avowedly contingent were absurd and contradictory.

SECTION III.

Of the Grounds of Reasoning from Experience.

OUR author now proceeds to shew that the credit given to experience itself, though, according to him, our only guide, rests on no solid foundation, but is the mere creature of the custom or habit of seeing some events invariably succeeded by others. “ When (says he, p. 302,) it is asked, *what is the nature of all our reasonings concerning matters of fact?* the proper answer seems to be, that they are founded on the relation of cause and effect. When again it is asked, *what is the foundation* “ of

“ of our conclusions concerning that relation? it may be replied in
 “ one word, *experience*. But if it be asked, *what is the founda-*
 “ *tion of all our conclusions from experience?* this implies a question
 “ of more difficult solution.” And, p. 305, “ All inferences from
 “ experience suppose as their foundation that the future will
 “ resemble the past, and that similar powers will be conjoined
 “ with similar sensible qualities; but if there be any suspicion
 “ that the course of nature may change, the past may be no
 “ rule for the future, and experience becomes useless.” And, p.
 307, “ When a person has lived so long in the world as to
 “ have observed similar objects or events to be constantly con-
 “ joined together, he immediately infers the existence of the
 “ one from the appearance of the other; yet he has not by all
 “ his experience acquired any idea of the secret power by
 “ which the one object produces the other; nor is it by any
 “ process of reasoning he is induced to draw this inference; still he
 “ finds himself determined to draw it. There is then some other
 “ principle that determines him——this principle is *custom* or
 “ *habit*.”

It may easily be shewn that this principle is not custom and habit, for to constitute these, repeated observations are requisite; whereas the memory of a single instance is often sufficient to induce the mind even of a child, or a brute animal, to expect in similar circumstances an event similar to that already experienced.

Of

Of this Mr. Hume seems to have been afterwards sensible, for he tells us, p. 314. " that the operation by which we infer like effects
 " from like causes is too essential to the subsistence of mankind
 " to be left to the slow deductions of reason; and that it is
 " more conformable to the ordinary wisdom of nature to secure
 " so necessary an act of the mind by some *instinct*, which may
 " be infallible in its operation, independently of all deductions
 " of the understanding." And in this I perfectly agree with him; but surely it is unreasonable to pretend that, even on reflection, no other principle can be found for inferring similar effects from similar causes in similar circumstances. A reflecting mind must soon discover that the whole system of nature has hitherto been governed by general laws. As long as these subsist, it is evident that events conformable to them may with certainty be expected. The only doubt which can by any possibility be entertained, but which in fact never occurs, is whether these laws will hereafter exist as they have heretofore existed. But a suspicion of this kind, supposing it ever harboured by any man in his senses, is easily removed by reflecting on the attributes of the author of nature. As the cessation of these laws must be attended with the destruction of the whole system, it may rationally be inferred that, whenever that is to happen, it will be announced by preceding signs, or otherwise; thus that disastrous subversion of the general law to which liquids are subjected, in consequence of which nearly the whole
 animal

animal race perished at the time of the Noachian deluge, was announced by Noah one hundred and twenty years before it happened; and I remarked that every succeeding calamity, by which large portions of mankind were affected, and of which distinct accounts have reached us, as volcanic eruptions and earthquakes, have constantly been announced by extraordinary events, to which if sufficient attention were paid, the impending destruction might have been foreseen, and in great measure prevented; and yet these disasters are the result, not of a violation, but barely of the more occult operation of the laws of nature.

Thus the first eruption of Mount Vesuvius in the 79th year of our æra, which overwhelmed Herculaneum and Pompeii, was preceded by earthquakes, and hoarse rumbling subterraneous sounds resembling thunder, and an unusual cloud of smoke*.

SIR WILLIAM HAMILTON, relating the late tremendous eruption of this mountain in 1795, remarks that the classical accounts of the eruption in 79, and that of the subsequent great eruption in 1631, so nearly agree, that the former might, by only changing the date, pass for an account of the last, so exactly did their circumstances resemble each other. And moreover adds, that if the subterraneous noises, the decrease of water in the wells, and a

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few

* 6 Collect. Acad. and Pliny's Letters.

few puffs of smoke observed near torre del Græco *two days before*, had been communicated at the time, it might easily be foreseen that an eruption was near at hand, and that its force was directed towards that part of the mountain *.

THE earthquake which ingulphed Antioch, in the 115th year of our æra, was preceded by violent storms, thunder and lightning, and an excessive heat †.

IN 1456 an earthquake shook the whole kingdom of Naples, overturned many cities, and destroyed 60,000 of the inhabitants; it was preceded by an extraordinary fall of rain, that lasted two months without any wind ‡.

THE earthquake which destroyed several cities in Sicily in 1639 was announced by subterraneous thunders, an uncommon agitation and elevation of the surrounding sea, and violent storms ||. And that which overturned Catania and 60,000 of its inhabitants in 1693, was announced by another less considerable, unusual clouds and heat the preceding day §.

LASTLY, previous to the great earthquake to which Lisbon owed its subversion in 1755, an extraordinary drought prevailed for several years, and the preceding day an uncommon offuscation of the sun **.

HENCE

* Phil. Transf. 1795, p. 74 and 76. † 6 Collect. Acad. 498. ‡ Ibid. 535.
 || Ibid. 563. § 2 Phil. Transf. Abr. 401. ** Phil. Transf. 1755, p. 403, 410.

HENCE in the early ages of the world, before the equilibrium of the constituent masses of the globe had been fully established, and while, consequently, internal commotions must have been much more frequent, it having been observed that extraordinary convulsions were announced by extraordinary appearances, the greatest attention was paid to such appearances; an attention which at last degenerated through fraud and imposture into the grossest superstition. Thus judicial astrology, soothsaying, augury, &c. originated. But the rejection of such abuses should not prevent attention to uncommon appearances, connected either with the atmosphere or the earth. By wisely taking warning from them, only fifteen lives were lost in the great earthquake which overturned Quito in Peru on the 27th of April 1755, 6 Collect. Acad. 627. In the passages already quoted Mr. Hume asserts, that by re-iterated experience we gain no idea of the secret power by which one object produces another, and thus insinuates that we have no knowledge of any power: but though strictly speaking we have no idea of *power*, the word *idea* properly denoting only the faint copy of a previous sensible impression, yet we have a *notion* of it, since we understand and can define what we mean by it, namely, that property of an object with which the substantial or modal existence of another object, not yet in being, is necessarily connected and on which it depends; as it is on this property the efficiency of causes is grounded, we are certain of its existence, since they exist, though its essence be unknown. Just as we are

convinced of the thinking principle within us, of which we also have only a notion and not an idea. Mr. Hume need not search for its source, for it evidently arises from reflection, an operation very different from consciousness, with which he confounds it in arguing against this origin, p. 319, &c.

SECTION IV.

Of the Nature of Belief.

MR. HUME's opinion respecting the nature of *belief* is as singular as any of the opinions we have already examined, and though of much less importance than those, yet it may not be amiss to take some notice of it; premising that by belief he does not mean the mere persuasion of any truth upon the credit of testimony, and of which we have no personal knowledge, but the persuasion that any object whatsoever will be followed by any other as its effect.

To explain the nature of belief, he tells us, p. 310, " that having found in many instances that any two kinds of objects, as
" flame and heat, snow and cold, have always been conjoined together, if either be presented anew to our senses, the mind is
" carried by custom to expect heat or cold, and to *believe* that such
" a quality does exist, and will discover itself on a nearer approach."
" This belief," he adds, " consists in some *sentiment* or
" *feeling*,

“*feeling*, which depends not on the will, nor can be commanded “ at pleasure.” Here he confounds the instinctive impulse by which we are induced to judge that these objects will be conjoined, or that one sensation will be followed by another, with the judgment that arises from that impulse, and which also accompanies it, and may be called a sort of sentiment or feeling. By reason of its accompanying the judgment, both are, when they respect a *future* event, denoted by one word, namely, *expectation*. But with regard to *past* events, the sentiment is particularly attended to as accompanying the judgment, and if *steady*, it is called *confidence* or *assurance*, and both it and the judgment taken together are called *certainty*; and if *unsteady* and wavering in the highest degree, they are called *doubt* or *hesitation*; or if the fluctuation be less considerable, *probability*. Our author, however, thinks that this sentiment comprehends the whole of what we call *belief*. To define it he allows to be a difficult, if not an impossible task, but thinks it not improper to attempt a description of it, evidently for the purpose of shewing that belief is not grounded on reason, but a mere blind instinct. “ Belief (he says) is “ nothing but a more vivid *conception* of an object than what “ the imagination alone is ever able to attain:” forgetting *that* to be the very description he had already given of a *sensation* or *impression*, p. 289, where he tells us “ there is a considerable difference between the perceptions of the mind, when a “ man feels the pain of heat, and afterwards recalls to his memory

“ more this sensation, or anticipates it by his imagination ; these
 “ faculties may copy the perceptions of the senses, but never can
 “ reach entirely the force and vivacity of the original sentiment ;”
 and p. 290, “ by the term *impression*, I mean *all* our more lively
 “ impressions, when we hear, see, or feel, or love, or hate, or
 “ desire, or will.” Now the conception of an object is not an
 emotion like love or hate, but must be either what he calls
 an impression of sensation, or an idea ; and he expressly tells
 us that the conception, which he calls belief, is stronger and
 more vigorous than any idea, therefore it must be a sensation,
 and this it evidently is not ; his account is therefore faulty.

ADD to this that belief necessarily implies the conjunction
 of two objects, and therefore cannot be confined to the con-
 ception of one only ; of this our author himself seems to have
 had a glimpse, for p. 311, he tells us, “ that belief is *some-*
 “ *what felt by the mind*, which distinguishes ideas of judgment
 “ from the fictions of imagination.” He felt then that judgment
 was somehow involved in belief ; but an idea of judgment is
 an expression both inconsistent with his own definition of ideas,
 and in this case appears to me unintelligible.

SECTION

SECTION V.

Of Miracles.

AFTER the extraordinary efforts which we have seen in the preceding sections made by Mr. Hume, to subvert the rational foundation of the belief of any past fact, namely, its conformity to general and uniform experience of similar facts in similar circumstances, and to attribute the acknowledged influence of such experience on mankind, solely to custom and instinct, principles which he elsewhere declares to be fallacious, (p. 371.) we should little expect to see such conformity set up as an evidence of the existence, or the want of it, or opposition to it, considered as such an evidence of the non-existence of any fact, as to admit of no exception or modification in any possible case, but, on the contrary, such as should necessarily be received as a full and entire proof of either respectively. This tergiversation and complete abandonment of principle we shall clearly discern in examining his celebrated Essay on Miracles; an essay which he valued above all others, and to which he told me twenty-two answers had been made, hinting, that if any of them had been satisfactory any other would have been judged superfluous.

THE number of answers, after perusing some of them, and particularly that of Dr. Campbell, and that lately given by an ingenious member of our Academy, suggested to me a conclusion

clusion very different from that deduced by Mr. Hume. It appeared to me that the arguments advanced in that essay were incompatible with so many uncontrovertible truths, that their falsehood might be variously demonstrated by various persons; and as mathematical problems daily receive various solutions without implying the insufficiency of the foregoing, so the artificial disguises of error may be variously detected by several, and with equal success. Emboldened by these considerations I also venture on this field of disputation, on which I engage our common adversary in a method somewhat different from that followed by others, namely, by pursuing him step by step.

THIS mode of refutation, though apparently the most direct and apposite, is however, sometimes exposed to this inconvenience, that when general sources of fallacy or error are widely scattered through a declamatory performance, such as that I now consider, it is not easy to select the particular passages best suited for their detection. This difficulty I mean to obviate by stating the most prominent of each kind in preliminary remarks.

1^o. A CONSTANT fallacy lurks in our author's application of the term *experience*; sometimes he applies it to our own past or actual experience of which we have a metaphysical certainty; sometimes to that of others only, and not our own,
of

of which we can have at most only a moral certainty; and sometimes he denotes by it a mere conformity to past experience, *either* of our own or of others, which is often attended with physical or moral certainty, and often with bare probability: these different senses he dexterously shifts and employs as best suits his purpose.

2^d. THE radical error that pervades the whole of this Essay; and is indeed the corner stone on which his whole theory must rest, even if the equivocal use of the term *experience* had been avoided, consists in ascribing the same immutability to the laws by which corporeal nature is governed, as to those which are inherent in the nature of moral agents. Knowledge of the former is conveyed to us chiefly by experience; that of the latter arises partly from experience, but being homogeneous with, and analogous to our own feelings, partly also from consciousness: the former are clearly discerned to proceed from the power and wisdom of the author of nature, which experience itself shews us not to require their absolute immutability in all possible circumstances. Thus no law has ever been considered less mutable than that of the descent of bodies when unsupported, yet exceptions to it have at last occurred, not only through the now well known, but hitherto inexplicable, powers of magnetism and electricity, but also in the adherence of the hardest polished

bodies to each other; and to what degree, on what occasions, and in what circumstances the most general laws of nature may still be found to vary, or to have varied, we are profoundly ignorant. But with regard to the laws that originate in the nature, and are essential to the constitution of rational agents, particularly of the human kind, the case is very different; though they also often restrict, qualify, or modify each other to a surprising degree, yet the extent, to which, in consequence of these modifications, the apparent anomalies of human conduct can reach as long as men retain the use of their reason, is perfectly known,* and aberration beyond this limit being inconsistent with rational nature must be deemed impossible.

IF therefore the laws of physical and those of moral nature be in any case so opposed to each other, that both cannot be reconciled, but one or other must be deemed to have been infringed, it is easy to discover which of them, the one being absolutely, the others only hypothetically inviolable, namely, in certain known circumstances.

I NOW

* Nous qui sommes hommes, ne sçavons nous pas bien *jusqu' a quel point* d'autres hommes ont pu être ou imposteurs ou dupes?

FONTENELLE's Hist. des Oracles, p. 12, in 8vo.

I NOW proceed to the examination of the essay.

Page 345. IN the first paragraph an inaccurate expression occurs, incompatible with the philosophic precision to be expected in argumentative treatises. He tells us "that a weaker evidence can never destroy a stronger." Now all evidence is equally strong, and a weak evidence is no evidence. It is only in a forensic sense, where evidence is taken for synonymous with proof, that this position can be allowed to be true. In the philosophic sense one evidence may be more easily and immediately discerned than another, but when discerned it is equally strong. Thence he infers, that "the evidence of the truth of the christian religion is less than the evidence of the truth of our senses;" which is also a mistake. The evidence of our senses, being immediate, is more easily attained than that of the truth of christianity, which results from a comprehensive view of the numerous arguments that produce it; but this evidence, when once attained, is equal to that of our senses. Thus the evidence resulting from the complex demonstrations of Apollonius or Archimedes is as strong as that of the primary axioms of geometry, though much more difficultly attained; the evidence of transmitted testimony is frequently as strong, and as justly excludes all doubt, as the evidence of our senses. Can any one now doubt that such persons existed, as William the III, Henry the VIII, or even Julius Cæsar, or Alexander, &c. or of the existence of

Rome, Constantinople, or Jerusalem, any more than if he had seen them?

P. 344. "SOME events have been found in all countries, "and in all ages, to have been constantly conjoined together, "others are found to have been more variable, so that in our "reasonings concerning matters of fact, there are all imaginable "degrees of assurance, from the highest certainty to the lowest "species of moral evidence." Here Mr. Hume, in common with many others, confounds certainty with evidence; yet they are perceptions perfectly distinct. Evidence is a clear discernment, certainty a full assurance of truth. Evidence is always accompanied with certainty, but certainty is often destitute of evidence. Thus some Mahometans are as certain of the truth of their religion as we are of ours, to say nothing of our own various sects, yet none will say that both are founded on evidence. Evidence arises from intuitive, demonstrative, or instinctive knowledge; certainty often from early habits, a partial view of a subject, or a passionate regard for some sentiment or opinion. Evidence excludes all possible doubt, certainty only all actual doubt. Evidence is contrasted with obscurity, certainty with probability or doubt. We are certain that future events of a physical nature will correspond with those that we have heretofore constantly and uniformly experienced, but we have no intrinsic evidence of such correspondence and conformity in all cases; for as Hume justly observes, the contrary involves no contradiction.

AND

AND here for the sake of perspicuity it may be proper to notice a few general circumstances in which this assurance arises, and which serve to distinguish it into distinct species.

THE first is *metaphysical* certainty, which is commonly attended with, and grounded upon, evidence. This attends our actual sensations and other perceptions, and the clear and distinct memory of the past, and all demonstrative reasonings deduced from our perceptions, &c.

THE second is *physical* certainty, which is seldom attended with evidence; of this nature is the assurance that attends the belief or expectation of any future physical fact.

THE third is moral certainty, which attends self-evident or demonstrative moral truths, and frequently the belief of the past or future actions of rational agents. It is often grounded upon, but often also unaccompanied by, evidence.

THE fourth is of a *mixed* nature, regarding past or distant physical facts, which we have never experienced, and is grounded partly on their conformity with our own experience, and partly on testimony. Sometimes the one, and sometimes the other, is the predominant ingredient that produces this certainty. I now return to Mr. Hume.

Page 344. "A wise man therefore proportions his belief to his evidence" (he means to his proof): "in such conclusions as are founded on an infallible experience, he expects the event with the last degree of assurance, and regards his past experience as a full proof of the future existence of that event." Let us here consider what experience he dignifies with the appellation of *infallible*. It surely is not his own *personal* experience, but that general and uniform experience of others which he could know only by testimony, for if he never before fired a pistol or a cannon, he would, on attempting it, expect the event experienced by others, with the same degree of assurance, as if gained by his own practice; but neither his nor their experience can be denominated *infallible*, for both engines often misfire or burst. This term indeed is never applied to experience, but by quacks or mountebanks, who promise infallible cures, &c. The expectation of *wise men* is generally confined to a high degree of probability, and seldom rises to certainty, except in very simple cases; and even then absolute infallibility on all possible occasions, and in all possible circumstances, is never ascribed to it.

Ibid. "In all cases of probability we must balance the opposite experiments, and deduct the smaller number from the greater, in order to know the exact force of the superior evidence," or rather probability—This mode of estimating probabilities
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is erroneous, and in many cases productive of absurdity. Mathematicians, who have treated this subject with the most rigorous accuracy, follow a very different method. They denote certainty by an unit, and probability by fractions of which the denominator consists of the number of times or trials in which the experiment has either happened or failed, and the numerator of one of them exhibits the number of trials in which it has happened, and that of the other the number of trials in which it has failed; and then they consider their *ratios*, and not their difference. Thus if an event has happened ten times, and has failed five times, the probability that it will happen again is $\frac{10}{15}$, and the probability that it will not happen again is $\frac{5}{15}$: then its probability is as two to one. Whereas by Mr. Hume's rule of subtraction, the superior probability would be only $\frac{5}{15}$, and thus would be converted into an improbability; for an experiment that has succeeded in half the number of trials to which it had been exposed, is justly considered as doubtful, it having failed as often as it succeeded: but if it has not succeeded even in half the number of trials, it must be considered as *improbable*.

Ibid. " There is no species of reasoning more useful or necessary to human life, than that derived from the testimony of spectators. We may even deny it to be founded on the relation of cause and effect; but it is sufficient to observe, that our assurance in any argument of this kind is solely derived from
 " our

“ our observation of the veracity of human testimony, and of the
 “ usual conformity of facts to the reports of witnesses, which, like
 “ all other objects, have no discoverable connexion ; nor can any
 “ inference be drawn from one to the other, but such as is
 “ founded merely on experience of their constant and regular
 “ conjunction.” This Dr. Campbell and others deny, and I believe justly ; for credit is originally given to testimony, and even to experience itself, from instinct, and in most cases by persons who never reflected on the motives mentioned by our author. Experience barely teaches us to restrict the confidence we are by nature prompted to repose in testimony indiscriminately, and confine it to testimony duly circumstanced, as Dr. Campbell has also well observed. But though I admit this principle, I shall not avail myself of it in the sequel of this controversy.

Ibid. “ As the evidence derived from human testimony is
 “ founded on past experience, so it varies with that experience,
 “ and is regarded as a *proof*, or a probability, according as the con-
 “ junction between any particular kind of report and any kind of
 “ objects has been found to be constant, or variable.”

THIS argument is a palpable sophism, founded on the double meaning of the term experience ; it denotes both personal experience, and the experience of others ; let it be confined to either sense singly, and it will be found false in the first, and absurd in the
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the second. For first, the evidence of testimony cannot be said to be founded on our personal past experience of the constant, or variable, conjunction of reports and their objects; for we justly give credit to numerous reports, of whose conjunction with their objects we never had, nor could have, any personal experience, nay not even of any thing analogous to them. Did not Mr. Hume give credit to the reports of volcanos? Did he ever see them, or any thing like them? Did he not believe the decapitation of Charles the first, as we do that also of Lewis the sixteenth, though we neither saw it, nor any thing analogous to it? Did he ever see a murder of any kind committed? Yet did he not believe the reports of such crimes? But it were endless and superfluous to enlarge on this head. In this sense of the word experience his argument is evidently false. I therefore pass to the second sense. In the second sense the argument would run thus: *the evidence derived from testimony is founded merely on the experience of other men.* This sense is too glaringly absurd to need being insisted upon; for how can I know the experience of others, but by testimony? And, this being granted, the argument would amount to this: *the evidence derived from human testimony is founded on human testimony.*

NEITHER can it be said that the word *experience* is taken in a compound sense, denoting partly our own personal experience, and partly that of others; for though this be true in a certain sense, it is not so in that which Mr. Hume's argument requires,

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namely, that they should respect the same object ; for they are too often separated to be true in this sense. His argument is therefore false in every sense he could ascribe to it. The true foundation of the credibility of human testimony, in cases not miraculous, is that laid down by all philosophers and jurists, namely, the consistency of the fact attested with the known laws of nature, and such qualifications and circumstances of the witnesses as we know both from reason * and experience should entitle them to credit.

P. 345. “ Many particulars diminish or destroy the force of any
 “ argument derived from human testimony ; for instance, if the
 “ fact partakes of the *extraordinary* and the *marvellous*, in that case
 “ the evidence resulting from the testimony admits a diminution
 “ greater or lesser in proportion as the fact is more or less unusual.
 “ For the reason *we* place any credit in witnesses or historians, is
 “ not from any connexion which we perceive *a priori* between
 “ testimony and reality, but because *we* are accustomed to find a
 “ conformity between them ; but when the fact is such as seldom
 “ falls under *our* observation, there is a contest of two opposite ex-
 “ periences, of which the one destroys the other as far as it goes.
 “ The same principle of experience which gives *us* a certain degree
 “ of assurance in the testimony of witnesses, gives *us* also in this
 “ case

* Note, *Reason* here denotes the knowledge derived partly from consciousness, and partly from that circuitous experience well noticed and explained by our author in the note p. 308.

“ case another degree of assurance against the fact which they endeavour to establish; from which contradiction there necessarily arise a counterpoise and mutual destruction of belief and authority.”

IN this paragraph many particulars indeed deserve animadversion.

1^o. The extraordinary and the marvellous should not be confounded. Many facts are extraordinary, yet not marvellous; and many marvellous, that are not extraordinary. The birth of twins is not an ordinary fact, nor is the death of a man at the age of one hundred years, yet, though there be but one instance of the first in a flock of one thousand ewes, and of the other in a mortuary list of ten thousand deaths, a common shepherd is credited in the first case, and an unknown compiler of a bill of mortality in the second case, without any diminution of credit; and the reason is, because neither fact is contradictory to the known laws of nature, though both are unusual, and the laws relative either to the origin or cessation of life are in great measure unknown, and because such facts, though by far not the most usual, are yet known by testimony to have often occurred.

2^o. It is plain from the constant recurrence of the words *we* and *us*, that by the experience mentioned in this paragraph our own personal experience is denoted, and indeed the tenor of

his argument requires it to be taken in that strict confined sense ; and yet in this sense his assertion is plainly false. In innumerable instances we give credit to testimony concerning facts, whereof, not only we have not been accustomed, but also have never observed the conformity with the testimony. Thus, to say nothing of the relations of earthquakes and volcanos, the correspondence of which relations with the facts described could not be known to Mr. Hume from his own experience, as he never observed either of those phænomena, I would ask him, when had he or any of his acquaintance seen a king put to death after a trial, by his own subjects ? A fact surely both marvellous and extraordinary, of which there are but two or three instances in the annals of mankind, and yet he believed, and is himself the historian of such a fact.

3°. He tells us that with regard to *such* facts, “ the same
 “ principle of experience which gives us a certain degree of
 “ assurance in the testimony of witnesses, gives us in this case
 “ another degree of assurance against the fact ; and hence a contra-
 “ diction, from which there necessarily arises a counterpoise and
 “ mutual destruction of belief and authority.” Let him apply this reasoning to the cases just mentioned, and he will perceive its illusion.—But to examine it more strictly, let us remark that it supposes, that of one and the *same* numerical fact our experience gives us an assurance which is contradicted by testimony ; for if only a *similar* fact be meant, there can be no contradiction, no more than
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if he had observed that on the first of June 1770 it had rained in Edinburgh, and a witness deposed that it did not rain on that day at London, nor in Edinburgh on the first of June 1771. But if he means the same numerical fact, there may indeed be a contradiction but there will be no counterpoise nor mutual destruction of belief and authority, for he assuredly will adhere to his own experience, and hold the contradictory testimony at nought.

I SHALL take no notice of the proverbial saying at Rome relative to Cato, as every one knows such trite sayings are loose modes of expression, and never strictly and literally taken.

P. 345. “ THE Indian Prince, who refused to believe the first relation concerning the effects of frost (in Holland), reasoned justly. It naturally required very strong testimony to engage his assent to facts, which arose from a state of nature with which he was not acquainted, and bore so little analogy to those events of which he had constant and uniform experience:—though they were not contrary to his experience, they were not conformable to it.”

ACCORDING to Mr. Hume's principles, certainly this Indian prince (the king of Siam) reasoned very justly, and should not admit that water was converted into ice by any degree of cold, upon any testimony; nor does it appear that he ever did admit it.

Neither

Neither should he admit that there existed any state of nature which he had not himself observed, and which was contradicted by the general and uniform experience of the kingdom of Siam. Mr. Hume indeed says, it was not contrary to his experience, but *merely* not conformable to it;* but this non-conformity is in fact a *contrariety*, since liquidity and solidity are contrary states. Nay, according to Mr. Hume's mode of reasoning in the preceding paragraph, it was even a contradiction; for *his* experience informed him that water was *always* liquid, and the fact *related to him* was that water was *sometimes* solid (no allowance being made for different climates): neither should he believe that there existed, in any season, a degree of cold which he had never experienced. But in reality this Indian Prince reasoned very absurdly; for he must have known that lead, silver and gold, or at least that pitch, wax and tallow are rendered liquid by a certain degree of heat and become solid when cooled: by analogy he should therefore conclude, that water might similarly be affected by greater degrees of cold; and that it was so, he should have admitted on proper testimony, as all Europe did upon Gmelin's testimony, that mercury was frozen in Siberia, long before the illustrious Cavendish had repeated the experiment in England. He should also have known that ice was not unfrequent in the northern parts of Ava and the mountains of Cochinchina, kingdoms bordering on Siam.

MR.

* Locke also calls it contrary: book iv. chap. 15, § 5.

MR. HUME however, consistently enough I must own, endeavours to justify the incredulity of the Indian Prince on this occasion; for, p. 346, says he, “ It must be confessed, that in the case
 “ of freezing the event follows contrary to the rules of analogy,
 “ and is such as a rational Indian could not look for. The opera-
 “ tions of cold upon water are not gradual according to the de-
 “ grees of cold, but whenever it comes to the freezing point, the
 “ water passes in a moment from the utmost liquidity to perfect
 “ hardness. Such an event may therefore be denominated *extra-*
 “ *ordinary*, and requires a pretty strong testimony to render it
 “ credible to people in a warm climate.”

THIS statement is incorrect in several points. I have already shewn that the freezing of water is analogous to that of other liquids, whether naturally or artificially rendered so, each of which has its peculiar point of consolidation. And though water (nor other liquids) does not congeal before it comes to its freezing point, yet it may be cooled below that point before it freezes: it does not therefore in a moment pass into ice when it comes to that point; nay at all times, if its mass be considerable, it must be long exposed to that degree of cold, or to a much greater, before it is converted into ice, and its conversion is gradual, a crust being first formed on its surface, which successively acquires both depth and hardness, both being in great measure proportioned to the degree of cold. In this respect its congelation is analogous to that of wax and melted metals.—He adds that, “ as they never saw water in
 “ Muscovy

“ Muscovy during the winter, they could not reasonably be
 “ positive what could be the consequence.” If so, the fact should
 appear to them merely doubtful, and not contrary to analogy;
 consequently, even a slight testimony should suffice to establish
 it.

Ibid. “ But in order to increase the probability against the
 “ testimony of witnesses, let us suppose the fact which they
 “ affirm, instead of being only marvellous, is really miraculous;
 “ and suppose their testimony, considered apart, amounts to an
 “ entire proof, in that case there is proof against proof, of
 “ which the strongest must prevail, but with a diminution of
 “ its force in proportion to that of its antagonist.”

HERE is a glaring inaccuracy; for by *full proof* Mr. Hume
 understands such a proof as produces the last degree of assurance,
 and by an *entire proof* he evidently means a proof equally strong;
 how then can he suppose, in any case, one stronger than the
 other, and that the strongest should prevail?

Ibid. “ A miracle is a violation of the laws of nature; and as a
 “ firm and unaltered experience has established these laws, the
 “ proof against a miracle from the very nature of the fact is as
 “ entire as any argument from experience can possibly be
 “ imagined—nor can such a proof be destroyed, or the mi-
 “ racle

“ racle rendered credible, but by an opposite proof which is
 “ superior.”

HERE it is supposed very properly by our author, that the laws of physical nature may be contradictorily opposed by those of moral nature; for the proof by testimony of the violation of the former cannot be supposed full and entire, much less a superior proof, unless the falsehood of the testimony should imply a violation of the laws by which rational agents are governed. Now as it is metaphysically evident, that two contradictory propositions cannot both be true, but one must be true, and the other false, so one and the same fact cannot be supposed to have existed in conformity to the laws of moral nature, and not to have existed in conformity with the laws of physical nature. It is plain therefore that one or other of these laws must have been infringed, so that a miracle of some kind must have happened: if we do not admit that of a physical nature, we must admit that of a moral nature, and *vice versa*. We are therefore seriously to consider, which of these laws must, consistently with right reason, the occasion, and circumstances, be deemed to have been infringed; and not content ourselves with a mere suspension of judgment, unless the matter no way concerns us. Mr. Hume seems indeed to have decided this point; for he tells us, that the laws of physical nature are firm and unalterable: how he has learned their inalterability I cannot tell. That they have not been altered, except in a few instances

and for a short time, we may conclude from universal and nearly an uniform experience. But that the great Being that established them, could not also interrupt their action, or violate them on any occasion, I see no reason to suppose. Not Mr. Hume himself, in a note in the second part of this essay, admits the possibility of their alteration; for he tells us, “ that the decay, corruption and dissolution of nature is an event rendered probable by many analogies.” The truth of this assertion, which Mr. Hume very unsequentially admitted on the testimony of a few astronomers, I need not examine, but I entertain no doubt but they were violated at the time of the universal deluge, a fact attested, not only by the almost unanimous traditions of the most antient civilized nations, but by the evident traces of that catastrophe still apparent in many parts of the globe. That the physical laws of nature have since been interrupted on various occasions, for the establishment of the Jewish and Christian revelations, if any credit can be given to such testimony as Mr. Hume calls a full proof, seems to me demonstrated. A cause capable of interrupting these laws, and an occasion worthy of that interposition, have been assigned, the most cogent testimony that such interruption has actually taken place is produced, and the connexion of the present state of mankind by innumerable links with the belief of such interruption, in every age since the commencement of our æra, is still apparent. But a cause capable of producing a moral miracle in support of a falsehood, though anxiously sought for by some antient

antient and many modern philosophers, remains still to be discovered.

Page 347. IN the second part of this essay our author tells us, “ he had been much too liberal in supposing that the testimony upon which a miracle is founded may possibly amount to an entire proof, so that the falsehood of such testimony would be a kind of *prodigy*.” What signification he attached to the word *prodigy* I cannot determine. In its usual acceptation it denotes something produced by nature, but out of its common course; not a manifest violation of its *known* laws, but the result of *unknown* laws acting in unknown circumstances: such the effects of gunpowder, electricity and magnetism must, when first discovered, have appeared, or even the elevation of water in a common pump; and such the production of an animal with two heads must still appear. But the *moral* laws, or motives which can influence men in their senses, are perfectly known; and hence a line of conduct incompatible with these in known circumstances must be deemed absolutely impossible.

Ibid. THE circumstances our author thinks requisite, to give us a full assurance in the testimony of men, at least in case of miracles, are some of them new and extraordinary, being such as no jurist ever required. “ A miracle (he tells us) should, to give us this assurance, be attested by a sufficient number of men of such unquestioned good sense, education, and learning,

“ as to secure us against all delusion in themselves.” If by good sense he means that they should not be idiots, enthusiasts, or madmen, this qualification cannot be disputed; but why education and learning are required to attest *all sorts* of miraculous events, I cannot conjecture, as the knowledge of many such events requires nothing more than the free use of one’s sight or feeling. It is plain that neither education nor learning is requisite to observe, that a man notoriously blind from his nativity is made to see without any chirurgical operation, or that a man notoriously dead is restored to life; or to see a man walking on water as on firm land, &c. these are not tricks or impostures that require some skill for their detection.

THE second qualification he requires, is “ such undoubted integrity as to place them beyond all suspicion of any design to deceive others.” To this I perfectly agree.

THE third is “ such credit and reputation in the eyes of mankind, as to have a great deal to lose in case of being detected in any falsehood.” He might add, *or at least a great deal to fear in case of detection.* For men of an inferior class may be little known, and therefore not lose much credit or reputation; but they may well fear corporal punishment, loss of liberty or life.

Ibid. 4thly, He requires “ that they should attest facts performed in such a public manner, and in so celebrated a part
“ of

“ of the world, as to render detection (if false) unavoidable.” The testimony of witnesses, otherwise duly qualified, and acting under the terror of punishment, if found to prevaricate, does not appear to me to require much publicity to be intitled to credit: but this depends on various collateral considerations; for unless the falsehood of the testimony were itself miraculous, that is out of nature, I should give it no credit in such cases as we now discuss, whether the event were public or private. Neither do I see the necessity that the miracle should be performed in a celebrated part of the world; for, if false, its falsehood may easily be detected, or at least it may easily be rendered suspicious by those that are interested in discrediting it, whether performed in the country, or in a celebrated capital. Nay the scene of some of the grossest impostures of this nature has been laid in celebrated capitals, as Alexandria, Naples, Paris, &c.

AFTER enumerating some of the circumstances that should attend the attestation of a miracle, our author passes to those that, in his opinion, generally promote its reception and credit: I say *some*; for the circumstances that have preceded, accompanied, and succeeded the attestation of real miracles, are much more numerous and cogent.

Ibid. He tells us, that “ though we readily reject any
 “ fact that is unusual and incredible in an ordinary degree,
 “ yet in advancing farther, the mind observes not always
 “ the

“ the same rule; but when any thing is affirmed utterly
 “ absurd and miraculous, it rather the more readily admits
 “ such a fact, upon account of that very circumstance which
 “ ought to destroy all its authority. The passion of sur-
 “ prise and wonder, arising from miracles, being an agreeable
 “ emotion, gives a sensible tendency towards the belief of those
 “ events from which it is derived.”

THAT such a retrogressive disposition resembling a curve of double inflexion, rejecting a fact marvellous in a low degree, and readily receiving one marvellous in the highest degree, should exist in the human mind, would indeed be an extraordinary phenomenon, and such as I am not disposed to admit on the testimony of Mr. Hume; it being contrary to my own observation, though I have lived somewhat longer than he has. The general belief of second sight among the vulgar of his country probably suggested this notion to him. He should however remark, that the ready admission of the marvellous never takes place, even among the weakest men, and the most ignorant vulgar, except with regard to objects coincident with, or at least not repugnant to their religious belief, such as stories of witchcraft, apparitions, magick, &c. and even here that retrograde disposition does not appear, for the credulity of the most credulous has its bounds. Nay all will certainly resist this passion for the marvellous, if it be opposed by tendencies much more powerful, as attachment to their rooted prejudices, their
 fixed

ed habits, and regard to their immediate interests. A testimony opposed by such obstacles will certainly never be received through a mere love of the marvellous. The instances our author adduces of wonderful tales believed on the credit of travellers, or various historians, prove nothing more than the existence of a love of the marvellous in the human breast, which I readily admit. But the circumstances attending such loose tales, and those that have attended the testimony of real miracles, are so strikingly different, that none but the most ignorant can require a detailed comparison.

THE next circumstance, which, according to Mr. Hume, promotes the credit of supernatural and miraculous relations, “ but
 “ in reality forms a very strong presumption against them, is,
 “ that they are observed chiefly to abound among ignorant and
 “ barbarous nations; or, if a civilized people has ever given
 “ admission to any of them, that people will be found to have
 “ received them from ignorant and barbarous ancestors, who
 “ transmitted them with that inviolable sanction and authority,
 “ which always attend antient and received opinions.” Presumptions are certainly of weight, where proofs from the nature of the case cannot be expected. *Stabit præsumptio donec probetur contrarium.* is the rule of law; but where proofs can be resorted to, presumptions are of little weight. Prodigies, omens, and oracles are, it is true, frequently mentioned by pagan historians, as having occurred in ages of barbarism and ignorance; but so far are they from having been transmitted with that inviolable
 sanction

fancion and authority which our author mentions, that the historians themselves frequently relate them as doubtful. Miracles on the contrary are scarce ever mentioned by pagan historians. It is in countries perfectly civilized, and in the most enlightened periods, that these are said to have been performed. Let them happen where they may, it is the circumstances, occasion, and testimony that support them, which must finally evince their reality.

Our author adds, " a judicious reader is apt to say upon the
 " perusal of these wonderful historians, strange that such pro-
 " digious events never happen in our days! but it is nothing
 " strange I hope, that men should lie in all ages." Nor is it more
 strange, that presumptuous ignorance should in all ages deny the
 most certain facts. Witness the king of Siam already mentioned.
 Many men of education denied, as I well remember, the possibi-
 lity of the elevation of balloons for several months after their
 invention. Descartes denied the possibility of Archimedes's burning
 mirrors, since verified by Buffon. The telescopic discoveries of
 Galileo were looked upon by some philosophers as idle dreams,
fitter subjects of derision than of reasoning. Lord Bacon, as Hume
 himself observes, gave no credit to the Copernican system. Many
 prodigies mentioned by Livy, such as monstrous births, fire ap-
 pearing on the points of spears, have been also derided; though
 abundant proofs of such births may be seen in the volumes of
 the transactions of many Academies, and fire or lambent flame
 on

on the points of spears in certain situations is now well known to be no uncommon electrical phænomenon.*

HERE our author concludes his general reasoning against the credit of miracles upon any testimony; and as the remainder of his essay is nothing more than an attempt to prove, that many acknowledged impostures are as credible as those miracles whose credit is most firmly established, a subject foreign to academic discussion, I shall here close my observations on the paradoxes he has advanced.

* *Pilorum cacumina sua sponte arserunt. Cæsar de bello Africano cap. 6°. Plin. Hist. Nat. lib. 2. cap. 37. Priestley's Hist. of Electricity, p. 395.*